



**Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.**

## SECTOR 15 — CHART INFORMATION

## SECTOR 15

### GREECE—CHANNELS WEST OF NISOS EVVOIA

**Plan.**—This sector describes the inland route between the W coast of Nisos Evvoia and the mainland. The general descriptive sequence is from SE to NW.

#### Nisos Evvoia (38°30'N., 24°00'E.)

**15.1** Nisos Evvoia, a large and mostly mountainous island, lies parallel to and a short distance off the E coast of the mainland of Greece. Kandhilion Oros, the highest mountain range, stands along the SW side of the island. Oros Dhifis, 1,743m high, is the summit of the island. This peak is snow-covered for most of the year and stands near the middle of the island.

From the S, the island is separated from the mainland by Kolpos Petalion, Notios Evvoikos Kolpos, Dhiavlos Evripou, Porthmos Evripou, Vorios Evvoikos Kolpos, and Dhiavlos Oreon. Bridges at Khalkis connect the island to the mainland. Vessels use this inner route to avoid the bad weather in the Aegean Sea, but are limited in size by the restrictions of the narrow channels in the vicinity of Khalkis.

#### Dhiavlos Makronisou

**15.2** Dhiavlos Makronisou (37°40'N., 24°05'E.) lies at the SW entrance to Kolpos Petalion and leads between the rugged and irregular coast of the mainland, on the W side, and the island of Makronisos, on the E side. The principal dangers in this channel, which has a least width of 1.5 miles, are Ifalos Passa, Ifalos Makri and Ifalos Tripiti. The central fairway is deep and clear.

**Makronisos** (37°42'N., 24°08'E.) is a hilly and rugged island with cliffy coasts. Korifi Tripiti, 281m high, is the summit and stands 1 mile S of Akra Tripiti, the N extremity of the island.

Ifalos Tripiti, a dangerous reef, lies about 0.5 mile NW of Akra Tripiti. It usually breaks even in calm weather and several wrecks are reported to lie in the vicinity.

**Akra Angalistros** (37°39'N., 24°06'E.), a bluff point, forms the S extremity of the island and is marked by a main light. A prominent hill, 173m high, stands 2.3 miles N of this point.

Ifalos Makri, with a least depth of 3m, lies about 0.5 mile offshore, 2.2 miles NNW of Akra Angalistros. This reef should be given a wide berth.

**Akra Fonias** (37°41'N., 24°04'E.) is located 3 miles NE of Akra Sounion which is described in Sector 13. A light is shown from the S side of this prominent cape.

Ifalos Passa, a detached rock, lies about 0.3 mile offshore, 1.3 miles SW of Akra Fonias. This rock is almost awash and is the outermost danger along this stretch of coast.

Ormos Gaidhouromandra is entered between Akra Fonias and Akra Perdika, 0.8 mile NNW. This small bay affords shelter to small craft in either of two coves which are entered on both sides of a headland in the NW part of the bay. Small craft with local knowledge can anchor in a depth of 5m, mud, good holding ground.

**Lavrion** (37°43'N., 24°04'E.), a town, stands along the W and NW sides of a small bay which lies 1.3 miles N of Akra Fonias

and forms a natural harbor. Akra Ergastiria, the E end of a small and hilly peninsula, forms the N entrance point of the bay. This point is marked by a light and a reef, with a depth of 5m, lies about 250m SE of it and is marked by a buoy. A huge pile of mineral waste stands on the S entrance point and four large chimneys are situated on the hills rising steeply behind the town.

The town is fronted by several quays and piers which are used by ore carriers, vehicle ferries, fishing vessels, and small craft. The main facilities include Central Quay, 100m long, with a depth of 5.3m alongside, and The Passenger Pier which is L-shaped and has a berth 130m long with depths of 5 to 7m alongside. Vessels of up to 10,000 dwt, 140m in length, and 6.1m draft can be handled.

Pilotage is compulsory for vessels loading ore. Pilots, who are officials of the ore company, can be contacted on VHF and board 0.4 mile S of Akra.

Anchorage within this small bay is not recommended and vessels should stay clear of the S shore as several hulks front a shipbreaking yard.

**Ormos Thorikou** (37°44'N., 24°04'E.), a small bay, is entered 1 mile N of Akra Ergastiria and provides good sheltered anchorage. The best berth lies in a depth of 18m, mud and weed, good holding ground, in the middle of the bay. Several factories and buildings, fronted by small craft piers, are situated along the NW shore of the bay.

**Ormos Ayiou Nikolaou** (37°45'N., 24°04'E.), a small bay, is entered 0.7 mile NE of Ormos Thorikou and is sheltered from N winds. Akra Vrisaki, the N entrance point, is marked by a main light.

An ore loading jetty, 70m long, extends from the NW side of the bay and has a depth of 5m alongside its head. Two mooring buoys lie close off the head of this jetty. A chemical pier extends from the N side of the head of the bay and has a depth of 6m alongside.

A power station, along with several factories, is situated 0.5 mile W of Akra Vrisaki and is fronted by a pier. This pier extends SE for 150m and has a berth, 50m long, at its head with a depth of 14m alongside.

**Ormos Avlaki** (Ennia) (37°47'N., 24°05'E.), a small bay open to all E winds, lies 2.8 miles N of Akra Vrisaki and provides good anchorage to small craft. Akra Mavrovouni, the NW entrance point of Dhiavlos Makronisou, forms the N entrance point of the bay.

#### Kolpos Petalion

**15.3** Kolpos Petalion (37°50'N., 24°15'E.) is entered between Akra Sounion and Akra Mandili, 29 miles NE. This gulf lies between the mainland and the SW side of the SE end of Nisos Evvoia. Its N limit is considered to be in the vicinity of Akra Marathonos, located 29 miles N of Akra Sounion.

**15.4** Kolpos Petalion—South part.—**Ormos Raftis** (Ormos Markopoulou) (37°53'N., 24°02'E.), a small bay, lies

on the W side of the gulf, 5.6 miles NNW of Akra Mavrovouni. Akra Koroni, the S entrance point of the bay, is the termination of a conspicuous promontory, 131m high. Nisis Koroni, a small islet, lies close off the E side of the promontory and is 41m high. Nisis Raftis, 93m high, lies in the entrance to the bay, 0.3 mile NNE of Akra Koroni. This islet is marked by a light and its summit is surmounted by a large white statue. Nisis Raftopoula, a small islet, lies 0.4 mile WNW of Nisis Raftis and is 16m high. Both of these islets may be passed on either side.

Oros Perati, a bold and prominent hill, rises behind the N entrance point of the bay and is 306m high. Nisis Perati, a small islet, lies about 0.4 mile offshore, 1.3 miles N of the N entrance point. The land to the W of the head of the bay rises to sharp rocky hills.

Akra Pounda is the extremity of a narrow peninsula projecting from the head of the bay. Small towns stand on the shores of the two coves formed by this peninsula and are fronted by small craft harbors. The area is a resort and numerous hotels and villas stand along the shores of the bay.

The bay affords a large area for anchoring, but it is open to the E and the depths are rather considerable in places. The holding ground is not as good as in Ormos Thorikou. The best anchorage berths lie in depths of 15m about 0.5 mile SW or about 0.2 mile NE of Akra Pounda.

**Akra Velani** (37°59'N., 24°02'E.), located 6.8 miles N of Akra Koroni, is a low cape. Two islets, known as Kokkinonisia, lie near the edge of a shallow bank which extends up to 0.4 mile SE from the cape. A prominent church stands on the W islet and a light is shown from the E islet.

Ayios Ioannis, standing 2.8 miles SW of Akra Velani, is the highest of the hills in this vicinity and a conspicuous church surmounts the summit.

**Ormos Rafinas** (38°01'N., 24°01'E.), a small and sandy bight, lies 2 miles NNW of Akra Velani. A small town stands along the shore of the bight and is fronted by a small craft harbor which is protected by a mole and a breakwater. The harbor has depths of up to 6m and is mostly used by pleasure craft and ferries. Numerous villas and hotels extend along the shores to the N and S of the harbor.

**15.5 Akra Mandhili** (37°57'N., 24°31'E.) is the SE entrance point of Kolpos Petalion. Nisis Mandhili, 87m high, lies 0.5 mile SSE of this point. A main light is shown from a conspicuous structure, 8m high, standing near the SE end of this islet. The passage leading between the islet and the coast is deep.

**Ormos Karistou** (37°59'N., 24°26'E.), a large bay, lies at the NE entrance to Kolpos Petalion and affords refuge for those vessels unable to navigate Dhiakplous Kafiros during strong NE winds. It is entered between Akra Bouri, located 2 miles WNW of Akra Mandhili, and Nisis Paximadhi, 4 miles W. Nisis Paximadhi, 13m high, is a small islet which lies close S of Akra Paximadhi and is marked by a light.

The town of Karistos stands at the head of the bay and is fronted by a small quayed harbor which is formed by two breakwaters. The harbor has depths of 2.6 to 5m and is used by small craft and local ferries. A prominent chapel stands on a small islet at the W side of the bay and a conspicuous white church stands in the center of the town.

Vessels can anchor in the bay, but should be prepared for violent squalls which blow down from the high land during N winds. The usual anchorage is in depths of 18 to 30m, sand, about 0.6 mile S of the main breakwater. However, this roadstead is not good because the holding ground is poor and it is exposed to all S winds.

**Nisoi Petalioi** (38°00'N., 24°15'E.), lying close off the SW side of Nisos Evvoia, consists of a group of islands and islets. The currents, which are greatly influenced by the prevailing winds, run strongly between the islands and islets in this group.

Nisis Megalo Petali is the SW and largest island of the group. This island is 371m high and lies with its SE end located 5.2 miles WNW of Nisis Paximadhi.

Stenon Xero, a narrow passage, leads between the two larger islands of Nisoi Petalioi and the coast of Nisos Evvoia. At the N end of this strait, shoals extend from the shores and reduce the width of the fairway, which has a least depth of 11m. Vessels approaching this strait from the S should avoid two shoals which lie up to 1.2 miles offshore, 3.5 miles NW of Nisis Paximadhi.

**Marmari** (38°03'N., 24°19'E.), a village, is situated at the E side of a small bay. It is fronted by a small craft harbor which is protected by a mole and used by yachts, local ferries, and fishing boats. The coast in this vicinity is low and the buildings of the village are prominent. Vessels can anchor in depths of 22 to 31m, mud, close off the village.

**Akra Vigla** (38°05'N., 24°12'E.) is located 10.7 miles NW of Nisis Paximadhi. Nisis Elafi, a small islet, lies 0.4 mile SSE of the point and is 53m high.

Nisis Akio, 22m high, lies on a bank 2.1 miles W of Akra Vigla. This islet may be passed on either side.

Nisis Dhipsa, a low islet, lies 4.5 miles WNW of Akra Vigla and is marked by a light. This islet may also be passed on either side.

**15.6 Kolpos Petalion—North part.—Akra Marathonos** (38°07'N., 24°03'E.), the S extremity of a narrow promontory, 79m high, forms the SW entrance point of the N part of the gulf. Akra Strongilo, located 5.7 miles E of this point, forms the SE entrance point. Oros Pargadhi, a prominent hill, stands 2 miles ENE of Akra Strongilo and is 451m high. Trokhalos, a small craft harbor, lies 3.2 miles NE of Akra Strongilo and is protected by two breakwaters.

Several islets and rocks lie in this part of the gulf and considerably reduce the navigable width of the passage.

**Akra Ayia Marina** (38°12'N., 24°05'E.), located 4.7 miles NNE of Akra Marathonos, is a bluff headland, 217m high, which is marked by a light.

Nisidhes Verdhoyi (Berdugi Islets), a group of four islets, lies centered 1.6 miles ESE of Akra Ayia Marina. The NW and SE islets of this group are marked by lights. The channel leading W of the group has a least depth of 11m and the channel leading E of it is deep and clear.

Nisis Petousi, located 2 miles NNW of Akra Strongilo, is the SW islet of Stouronisia, a group of islets and rocks, which lie on the E side of the main channel. Nisis Fonias, located 3.5 miles ESE of Akra Ayia Marina, is the NW islet of this group. A shoal, with a least depth of 3.7m, lies about 0.8 mile NW of Nisis Fonias.

Ormos Ayias Marinas, entered close S of Akra Ayia Marina, affords good anchorage for small vessels in its NW and SW corners. However, this bay is subject to occasional violent squalls during N winds.

**Caution.**—A prohibited area, the limits of which may best be seen on the chart, fronts the N shore of Ormos Ayias Marinas. This area lies at the S side of a naval establishment and entry is with permission only.

### Notios Evvoikos Kolpos (38°20'N., 23°55'E.)

**15.7** Notios Evvoikos Kolpos, 25 miles long, lies between the N end of Kolpos Petalion and the S entrance of Porthmos Evripou. From the S, this channel is entered between Akra Ayia Marina and the SW end of Nisis Kavaliani, 1.3 miles NE.

Nisis Kavaliani, a large islet, is 173m high and fringed by a shallow bank. A conspicuous ruin surmounts the summit of a hill standing at the SW end of this islet.

To avoid the shoals in the vicinity of Nea Psara, vessels should keep to the S side of the channel.

**Ormos Aliveriou** (38°23'N., 24°02'E.) indents the N side of the channel. This large bay is entered N of Akra Aliveri, which is marked by a beacon. The village of Karavos stands at the N side of the head and is fronted by a small quayed harbor protected by a breakwater. The town of Aliverion is situated 1 mile N of this village. Small vessels, with drafts of up to 4m, can berth at the main quay. The bay affords anchorage in depths of 27 or 29m, close inshore with good holding ground.

Milaki cement factory is situated at the SE corner of the bay and is fronted by a jetty, 350m long, which projects W from the shore. A berth on the N side of the jetty has depths of 14.9 to 18m alongside and a berth at the S side has depths of 13 to 23m alongside. Vessels of up to 153,200 dwt and 274m in length have been handled.

Aliverion power station, with two prominent chimneys, is situated at the E side of the head of the bay. This station is fronted by a berth which consists of two mooring buoys and is protected from the S by a breakwater with a depth of 9m along its N side. The berth is connected to the shore by a submarine pipeline. Vessels of up to 122,000 dwt and 261m in length can be handled.

**Ormos Oropou** (38°20'N., 23°48'E.), a small bay, lies on the S side of the gulf and is exposed to N winds. It is entered between Akra Oropos and a point, which is marked by a light, 2 miles ESE. A village is situated at the head of the bay and is fronted by two piers which are used by ferries. Vessels can anchor in depths of 15 to 25m, sand, within the bay, leaving the fairway clear. Four conspicuous radio masts, 91m high, stand 1.3 miles WSW of Akra Oropos.

**Eretria** (Nea Psara) (38°23'N., 23°48'E.), a small resort town, stands on the N shore of the gulf. It is fronted by a small craft harbor which is used by ferries. Small vessels, with local knowledge, can anchor in a depth of 15m off the harbor. The harbor is protected from the W by a mole and from the E by an islet connected to the coast by a causeway. The prominent ruins of an acropolis stand on the summit of a hill, 130m high, close N of the town. The harbor should be approached from the SSW as numerous small islets and below-water dangers lie adjacent to the entrance channel and extend up to about 1.4 miles SE and SW of the harbor.

**Ormos Levkandi** (38°25'N., 23°40'E.), a small bay, lies in the NW corner of the gulf. A pier, which serves a brickworks, projects from the NW side of the head. It has a berth, 60m long, with a depth of 7m alongside. Vessels can anchor in a depth of 15m about 100m SE of the head of the pier. Pilotage in the bay is compulsory as it lies within the Khalkis pilotage area.

### Dhiavlos Evripou (38°26'N., 23°36'E.)

**15.8** Dhiavlos Evripou is the narrow passage at the NW end of Notios Evvoikos Kolpos which leads to Porthmos Evripou via Stenon Avlidhos, Dhiavlos Steno, and Notios Limin.

**Tides—Currents.**—The tidal currents in Stenon Avlidhos very occasionally attain a rate of 2 knots, but are usually much weaker. The tidal currents in Dhiavlos Steno turn at about the same time as those in Porthmos Evripou. They usually have a rate of less than 1 knot, but sometimes rates of 3 knots have been observed.

**Pilotage.**—Pilotage in the passage area is compulsory for all foreign vessels and for Greek vessels over 1,000 grt. Vessels should send an ETA at least 8 hours in advance. Pilots can be contacted by VHF and board vessels proceeding N about 1.2 miles SSE of the S entrance to Stenon Avlidhos. Pilots board vessels proceeding S about 0.7 mile NW of Akra Kakokefali.

The pilotage area extends from about 2.5 miles SE of Akra Avlis to 0.8 mile NW of Akra Kakokefali.

**Stenon Avlidhos** (38°26'N., 23°37'E.), the S part of Dhiavlos Evripou, is entered between Akra Avlis and Akra Bourtzi, 0.3 mile ESE. The navigable fairway, which is marked by lighted buoys, is constricted to a width of about 400m by shallow banks on each side of the channel. The N part of this passage is known as Khalkis Outer Harbor.

**Akra Avlis** (38°25'N., 23°38'E.), a very low point, is marked by a light shown from a prominent structure. Akra Bourtzi is formed by a sandy spit. A conspicuous ruined castle stands close within the point. It is easy to identify and appears as a low hill from a distance. When passing this point, the discolored water over the spit usually contrasts with the greenish color of the deep water in the fairway and serves as a good guide.

Ifalos Passandassi, a steep-to rock, lies on the NE side of the fairway, 1.7 miles NW of Akra Bourtzi. It is marked by a light and the prominent light structure is visible over the low land from the SE approach to Stenon Avlidhos.

**Ormos Megalo Vathi** (38°25'N., 23°36'E.), an inlet, indents the W side of the passage, 1.5 miles WNW of Akra Avlis. Khalkis shipyard and a chemical factory are situated along the shores of this inlet. Depths are generally less than 5m except in the marked channel which has depths of 5.4 to 6m and leads to the head.

Khalkis shipyard, with two floating docks, extends along the N side of the inlet to the head. It is fronted, near the N entrance point of the inlet, by a jetty with depths of 8.5 to 10.7m alongside. A quay, 125m long, is situated at the head and has a depth of 5.9m alongside.

A chemical factory stands close SE of the head of the inlet and is fronted by a T-shaped pier which has a berthing face, 20m long, with a depth of 3m alongside.

**Akra Peram** (38°27'N., 23°36'E.), marked by a light, is located at the NW end of the passage 1.2 miles NW of Ifalos Passandassi. Several tanks and chimneys are situated in the vicinity of this point. A wharf, 350m long, lies 0.3 mile S of this point and has depths of 5.1 to 6.2m alongside. It serves a conspicuous cement factory which stands close W.

**Caution.**—Due to the existence of submarine cables, anchoring and fishing are prohibited in an area, which may best be seen on the chart, extending across the passage in the vicinity of Akra Avlis.

A submarine pipeline, which may best be seen on the chart, extends NE across the passage in the vicinity of Akra Peram.

**15.9 Dhiavlos Steno** (38°27'N., 23°35'E.), a narrow channel, leads NW into Notios Limin. It is entered between Akra Peram and Nisis Passashas, an islet, 0.3 mile NE. The channel has a least width of 160m, but the navigable fairway, which is marked by lighted buoys, is constricted by shallow banks on each side and is only about 60m wide.

**Depths—Limitations.**—Vessels are restricted to 180m in length and a maximum draft of 6.1m. It is inadvisable for vessels with drafts over 5.5m to transit the channel at night.

The channel is spanned by a bridge with a vertical clearance of 36m. In addition, an overhead power cable, with a vertical clearance of 37m, crosses the channel.

**Caution.**—Due to the existence of submarine cables, anchoring and fishing are prohibited within Dhiavlos Steno.

**Notios Limin** (38°27'N., 23°35'E.) is an almost circular basin which is entered from the S through Dhiavlos Steno and from the N through Porthmos Evripou. The main tidal currents flow along the E side of this basin and at the W side they are hardly perceptible.

Fort Evripou, in ruins, is situated on a hill, 68m high, at the W side of the N entrance to the basin. A conspicuous spire stands at the SE end of the fort and a white church stands near the center. Numerous small craft usually lie at anchor to the S of this fort.

Several beacons are situated at the W side of this basin and serve as a range for the fairway within Dhiavlos Steno. Vessels can anchor in depths of 7 to 9m, mud, at the W side of the basin, clear of the fairway.

Ormos Vourkari, a shallow inlet, lies at the E side of the basin 0.4 mile S of the N entrance. A pier extends 440m S from the N entrance point of this inlet and has depths of 4.6 to 8.4m alongside. Vessels of up to 25,000 dwt and 6.4m draft can be accommodated. A quay, 300m long, extends N from the root of the pier along the NE side of the basin and has depths of 0.4 to 6m alongside.

### **Porthmos Evripou (38°28'N., 23°35'E.)**

**15.10** Porthmos Evripou, the narrowest part of the inland route, connects the NE corner of Notios Limin to the SE end of Vorios Evvoikos Kolpos. Kanithos stands on the W side of the strait and a conspicuous belfry stands at its SE end. The large and prominent town of Khalkis (Chalkis) stands at the E side. Khalkis Bridge, a sliding bridge, spans the S end of the strait. Shallow quays and a small craft pier line the sides of the strait close above this bridge.

**Tides—Currents.**—The tides in Porthmos Evripou rise about 0.8m at springs and 0.5m at neaps, but the tidal ranges in Notios Limin are small. High water occurs in Porthmos Evripou about 1 hour and 12 minutes later than in Notios Limin. Because of these differences, strong tidal currents are caused in the strait and rates of up to 7 knots have been experienced at springs.

The level of the water in the strait is affected by small seiches which occur independently at the S end of Vorios Evvoikos Kolpos and at the N end of Notios Limin. These seiches are of no importance up to 4 days before and after springs, but at other times they may cause frequent and irregular changes of direction in the currents when the rates are less than 1 knot.

**Depths—Limitations.**—The channel has a least width of 39m at its S end, where it is spanned by Khalkis Bridge. Vessels of up to 110m in length and 5.5m draft are permitted to pass through Porthmos Evripou.

Because the currents in the strait may attain rates of up to 7 knots, vessels are advised to transit only at slack water or with a favorable flow.

**Caution.**—Slack water may only last for about 10 minutes. Abnormal conditions may cause slack water to occur up to 15 minutes earlier or later than predicted.

Due to the existence of submarine cables and pipelines, anchoring is prohibited within Porthmos Evripou.

**15.11 Khalkis Bridge** (38°28'N., 23°35'E.), a sliding bascule bridge, spans the S end of Porthmos Evripou and consists of two parts. When the bridge is opened, these parts are drawn into tunnels on either side.

The bridge is opened on request between 2200 and 0500. In special circumstances, such as for the passage of naval and government vessels, it may be opened between 1000 and 1700. On the 5th and 20th day of each month, the bridge remains closed all day for maintenance. Vessels can communicate with the bridge control office by VHF. In most weather conditions, vessels with proper care may pass through the bridge without difficulty.

The bridge is usually opened when two or more vessels are waiting to transit the strait, the current being favorable or at slack water. In exceptional circumstances, the bridge may be opened during the day for a single large vessel or for a single small vessel carrying perishable cargo.

If the bridge is already open for power vessels, sailing vessels with auxiliary engines are permitted to follow through at night under power, if the current is suitable.

In the event of bad weather or a strong wind, the bridge may not be opened, even with a favorable current, if the authorities consider that safe passage cannot be guaranteed.

**Signals.**—Vessels requiring the bridge to be opened, either by day or at night, should sound five blasts on the whistle having a total duration of 20 seconds. This signal will be answered by the appropriate signal. Once the answering signal has been made, the whistle signal must not be repeated.

The position of the two parts of the bridge (open or closed) is immediately apparent by day, but at night, a red light is shown from the middle of the bridge when it is closed. This light remains visible while the bridge is being opened and is only extinguished when the bridge is completely open. Two green

lights are then shown on the W abutment of the bridge and two red lights are shown on the E abutment. These green and red lights help vessels to stay in the fairway and are much lower than the traffic signal lights.

The movements of the bridge are indicated by day by shapes and at night by lights displayed vertically from a mast standing at the signal station on the W end of the bridge. The movement signals are as follows:

1. Three black balls or a green light over a white light over a red light indicate that the bridge is closed and transit is prohibited.
2. A cone point down under two cones with points together or a white light between two green lights indicate that the bridge is open for vessels proceeding S with slack water or with the current; passage N is prohibited.
3. A cone point up between two black balls or a white light between two red lights indicate that the bridge is open for vessels proceeding N with slack water or with the current; passage S is prohibited.
4. A cone point down under two cones with points together and a red ball beside the hoist or a white light between two green lights and a red light beside the hoist indicate that the bridge is open for naval vessels proceeding S against the current; passage N is prohibited.
5. A cone point up between two black balls and a red ball beside the hoist or a white light between two red lights and a red light beside the hoist indicate that the bridge is open for naval vessels proceeding N against the current; passage S is prohibited.

### Vorios Evvoikos Kolpos (38°45'N., 23°15'E.)

**15.12** Vorios Evvoikos Kolpos, 42 miles long, lies between the N entrance of Porthmos Evripou and the SE entrance of Maliakos Kolpos. Both sides of this gulf are generally steep-to and clear of dangers. Violent gusts of wind sometimes descend from the Kandhilion Oros range, which stands along the E side of the gulf, during NE and N winds. Heavy squalls may also be expected to blow down from the high land at the SW side of the gulf.

**Akra Kakokefali** (38°29'N., 23°36'E.), a prominent rocky promontory, is located at the SE end of the gulf, 1.1 miles NE of Khalkis Bridge. A light is shown from a prominent structure, 12m high, standing on this point. Vessels waiting to transit Porthmos Evripou may anchor off this point.

Akra Mnima is located on the E side of the gulf, 7 miles NNW of Akra Kakokefali. A light is shown from a structure standing 200m offshore, 0.2 mile ESE of this point. Vessels transiting the gulf should pass nearer to Akra Mnima than to Akra Gaidharos which is located on the SW side of the gulf, 4 miles S. Akra Gaidharos, a low and sandy point, is fronted by a shoal bank and dangerous wrecks are reported to lie about 1 mile N and 2.3 miles NE of it.

Ktiponision (Nisos Gaidharos), rocky and dark in color, lies 2 miles SW of Akra Gaidharos. This islet stands out well against the background of sandy hills.

**Psakhna Terminal** (38°34'N., 23°36'E.) is situated 3.5 miles ESE of Akra Mnima and fronts a prominent soya factory. It consists of a berthing platform, with several mooring buoys, which is connected to the shore by a catwalk. Several

conspicuous silos stand at the root of this catwalk. The face of the platform is 10m long and the berths have a depth of 10.6m.

Pilotage is compulsory and is provided from Khalkis.

Anchorage can be obtained in a depth of 24m, good holding ground, about 1.5 miles SW of the terminal. A detached shoal, with a depth of 10m, lies about 0.6 mile SSW of the terminal.

**Ormos Skroponeriu** (38°30'N., 23°21'E.), a bay surrounded by high land, lies on the SW side of the gulf, 7.5 miles W of Akra Gaidharos. Nisis Gatzia, a steep-to islet, lies 0.5 mile ESE of the N entrance point and may be passed on either side. This bay affords sheltered anchorage in depths of 9 to 37m. The best berth is in the SW part of the bay, close W of a small peninsula that extends N from the S shore.

**Ormos Larmes** (38°34'N., 23°17'E.) is entered 4.6 miles NW of Ormos Skroponeriu and affords anchorage for small vessels. The small town of Larimna stands on the N side of the head of this bay. An islet, 6m high, lies close off the N shore of the bay and is surmounted by a prominent chapel. Vessels may anchor in depths of 27 to 37m between the islet and the S entrance point of the bay. An ore smelting works, with a prominent chimney, is situated on the S side of the bay and is fronted by a quay and several mooring buoys.

**15.13 Ormos Limnis** (38°46'N., 23°19'E.), a small and exposed bay, lies at the E side of the gulf. Steep hills rise behind the town of Limni which stands at the head. A factory, with a conspicuous chimney, stands 2 miles SE of the town. Vessels anchor close off this factory and secure their sterns to the shore.

**Kolpos Atalandis** (38°40'N., 23°08'E.), a large bay, lies on the W side of the gulf and is entered between Akra Kerata and Akra Livanates, 5 miles WNW. Nisis Atalanti, a large islet, lies close off the W shore of the bay and is 125m high. A light is shown from a rock lying close off the NW side of this islet. Nisis Gaidharos lies in the SW part of the bay and is connected to the shore by a causeway. Former ore loading piers project from the SE side of Nisis Gaidharos and from the SE side of the bay.

Good anchorage may be obtained in depths of 11 to 18m, firm sand, between Nisis Atalandi and the coast to the W. Although open to the N, this roadstead is sheltered from the furious gusts of wind which blow down from the high land of Nisos Evvoia.

Akra Arkitsa, a low and sandy point, is located 3 miles NNW of Akra Livanates. A main light is shown from a prominent structure, 15m high, standing on this point.

**Kolpos Aidhipsou** (38°52'N., 23°01'E.) lies on the N side of the gulf. The village of Loutra Aidhipsou is situated close within the E entrance point of this bay and is fronted by a small craft harbor used by ferries. Vessels with local knowledge can obtain sheltered anchorage in a depth of 35m in the NW part of the head of this bay.

### Dhiavlos Knimidhos (38°48'N., 22°49'E.)

**15.14** Dhiavlos Knimidhos is the main channel leading from the NW entrance of Vorios Evvoikos Kolpos into Maliakos Kolpos.

**Akra Lithadha** (Kinaion) (38°49'N., 22°50'E.) is the W extremity of Nisos Evvoia and a conspicuous shrine stands on

this point. Nisoi Likhadhes, a group of low islets and rocks, lies SW of the point. Nisis Strongili, the S islet of the group, is low and lies 1.1 miles SSW of Akra Lithadha. A prominent shrine stands near the N extremity of this islet and a light is shown from the summit. Research Rock, with a least depth of 8m, lies about 0.7 mile ESE of the light.

Akra Knimis, a low and salient point, is located 1 mile S of Nisis Strongili and is marked by a light. A conspicuous hotel is situated in the village of Kammena Vourla 2 miles WSW of the light.

The main passage leads between Akra Knimis and Nisis Strongili and is, with the exception of Research Rock, deep and clear.

Dhiavlos Strongilis, leading N of Nisis Strongili, has a least depth of 12m in mid-channel. However, the fairway is very narrow and this passage is not recommended, especially at night.

Poros Likhadhon, leading between Nisoi Likhadhes and Akra Lithadha, is narrow and has a least depth of 8.5m in the fairway. This passage is only suitable for small vessels with local knowledge. The tidal currents flow through this passage at rates of up to 2 knots.

Under normal conditions, the tidal currents in the channels between Vorios Evvoikos Kolpos and Maliakos Kolpos turn at about the same time as those in Porthmos Evripou. They attain rates of up to 1.5 knots, but are greatly affected by the prevailing winds.

### **Maliakos Kolpos (38°52'N., 22°38'E.)**

**15.15** Maliakos Kolpos indents the mainland of Greece, but its limits are not clearly defined. According to the broadest acceptance, the SE limit of the gulf lies in the vicinity of Akra Knimis and its NE limit lies in the vicinity of Akra Dhrepanon, a low and sandy point, which is located 5.5 miles NNW of Akra Knimis and marked by a light.

The gulf proper is considered to be the inner part which is entered between Akra Khiliomili and Akra Karavofanaro, 1.6 miles N. Akra Khiliomili, a low point, is located 7 miles NW of Akra Knimis. It is fronted by a shoal and marked by a light shown from a prominent tower, 8m high. The S part of the gulf is shallow and should not be approached without local knowledge. Vessels may anchor as convenient in the W part of the gulf in depths of 18 to 27m. Ormos Akhinou, lying close E of Akra Karavofanaro, affords good anchorage to vessels with local knowledge.

**Stilis** (38°55'N., 22°37'E.) (World Port Index No. 42440), a village, is situated at the head of Ormos Stilidhos, a large shallow bight, lying on the N side of the gulf. It is fronted by a small harbor and serves the town of Lamia which stands 8 miles W.

The harbor is entered via a channel, 45m wide, which leads NW through the obstructions and is dredged to a depth of 5.5m. There are two quays, 210m and 100m long, with depths of 6m alongside. Small vessels of up to 5m draft can be accommodated. An ore terminal, consisting of a T-shaped pier with several dolphins and mooring buoys, lies at the W side of the bight, 2.1 miles SW of Stilis. The head of the pier is 80m long and has a depth of 9.4m alongside.

Pilotage is compulsory and the harbor can be contacted by VHF.

**Caution.**—A submarine pipeline, which may best be seen on the chart, extends NE across the gulf from Akra Khiliomili and anchoring is prohibited in its vicinity.

### **Dhiavlos Oreon (38°56'N., 23°00'E.)**

**15.16** Dhiavlos Oreon, with a least width of 1.5 miles, separates the NW coast of Nisos Evvoia from the mainland of Greece and connects Maliakos Kolpos and Vorios Evvoikos Kolpos with Dhiavlos Trikkeri and the Aegean Sea. It is entered between Akra Dhrepanon and the W end of Nisos Evvoia. The shores on both sides of this passage consist of a low coastal strip backed by mountainous and wooded land. The tidal currents in the channel attain rates of up to 1.5 knots at springs.

**Akra Vasilina** (38°52'N., 22°51'E.), located 2.9 miles NNE of the W extremity of Nisos Evvoia, is a low and sandy point which is marked by a light shown from a prominent structure.

Achladi, a small town, is situated on the N side of the passage 2 miles NW of Akra Vasilina. It is reported (1994) to be fronted by a quay, 200m long, with a depth of 18.3m alongside. A prominent silo stands near the root of this quay.

Ormos Gardhikiou is entered 2.7 miles NNE of Akra Vasilina and provides good anchorage in depths of 26 to 33m about 0.5 mile from the head.

**Akra Ayios Sostis** (38°59'N., 22°57'E.) is located on the N side of the channel, 7.8 miles NE of Akra Vasilina. This salient point has prominent white cliffs on its E side and is marked by a light. Ormos Glifas lies close W of the point and provides anchorage in a depth of 26m near the head. Nisis Ayios Nikolaos lies about 0.2 mile offshore, 2.3 miles ESE of Akra Ayios Sostis. This low islet is covered with shrubs and surmounted by a chapel.

Ormos Oreon is entered E of Akra Nisiotissa, which is located 2.8 miles E of Akra Ayios Sostis, and provides anchorage in depths of 29 to 31m, sand. The small town of Oreoi is situated at the head of this bay and is fronted by a small craft harbor used by fishing boats. Two small islets lie on a rocky bank at the S side of the bay, 0.3 miles E of Akra Nisiotissa.

**15.17 Ifalos Oreon** (38°57'N., 23°03'E.) lies on the S side of the passage, 0.6 mile N of Akra Nisiotissa. This rocky and dangerous reef is marked by a lighted beacon.

**Akra Stavros** (39°02'N., 23°04'E.), the termination of a high promontory, is located on the NE side of the passage at the junction of Dhiavlos Oreon and Dhiavlos Trikkeri. Nisis Aryironisos, 66m high, lies on the N side of the passage, 1.9 miles S of Akra Stavros. This large islet is marked by a light at its E extremity and is fronted by several small islets and rocks on its N and S sides. Vessels are advised to pass at least 0.5 mile S of this danger.

Akra Kefala is located 3.4 miles SE of Akra Stavros and forms the SE entrance point of the passage.

**Caution.**—A submarine cable, which may best be seen on the chart, extends SE across the passage from Akra Ayios Sostis and anchoring and fishing are prohibited in its vicinity.